CLAIMS

What is claimed is:

1   1.   A method for protecting users from Web sites hosting computer viruses

2   comprising the steps of:

3   receiving information identifying a Web page selected for access by a

4   user;

5   determining whether the Web page is hosted by a Web site that is

6   included in a database of Web sites related to computer viruses; and

7   allowing access to the Web page based on whether the Web page includes

8   a link to a Web site that is included in the database.

1   2.   The method of claim 1, further comprising the step of:

2   preventing access to the Web page before determining whether the Web

3   page is included in the database.

1   3.   The method of claim 2, wherein the allowing step comprises the steps of:

2   allowing access to the Web page, if the Web page is determined not to be

3   included in the database; and

4   continuing to prevent access to the Web page, if the Web page is

5   determined to be included in the database.

1   4.   The method of claim 1, further comprising the step of:

2   allowing access to the Web page before determining whether the Web

3   page is included in the database.

1   5.   The method of claim 4, wherein the allowing step comprises the steps of:

2   continuing to allow access to the Web page, if the Web page is

3   determined not to be included in the database; and

4   preventing access to the Web page, if the Web page is determined to be

5   included in the database.

1   6.   The method of claim 1, further comprising the step of:

2   generating the database of Web sites related to computer viruses.

1   7.   The method of claim 6, wherein the generating step comprises the steps

2   of:

3   extracting, from a first Web page, a link to a second Web page;

4   fetching the second Web page using the link;

5   scanning the second Web page for computer viruses; and

6   storing information relating to a Web site that is hosting the second Web

7   page in the database.

1   8.   The method of claim 7, wherein the stored information includes

2   information identifying the Web site that is hosting the second Web page and

3   information identifying any computer viruses that were found in the second Web

4   page.

1   9.   The method of claim 7, further comprising the steps of:

2   extracting, from each Web page fetched, links to other Web pages;

3   fetching the other Web pages using the links;

4   scanning the other Web pages for computer viruses; and

5   storing information relating to Web sites that are hosting the other Web

6   pages in the database.

1   10.   The method of claim 9, wherein the stored information includes

2   information identifying the Web sites that are hosting the other Web pages and

3   information identifying any computer viruses that were found in the other Web

4   pages.

1   11.   The method of claim 6, wherein the generating step comprises the steps

2   of:

3   extracting, from a first Web page, a link to a second Web page;

4   fetching the second Web page using the link;

5   scanning the second Web page for terminology relating to computer

6   viruses;

7   reviewing content of the second Web page to determine whether a Web

8   site hosting the second Web page is virus hosting, if the second Web page

9   includes terminology relating to computer viruses; and

10   storing information relating to the Web site that is hosting the second Web

11   page in the database.

1   12.   The method of claim 11, wherein the stored information includes

2   information identifying the second Web page and information identifying any

3   computer viruses that were found in the second Web page.

1   13.   The method of claim 11, further comprising the steps of:

2   extracting, from each Web page fetched, links to other Web pages;

3   fetching the other Web pages using the links;

4   scanning the other Web pages for terminology relating to computer

5   viruses;

6   reviewing content of those other Web pages that include terminology

7   relating to computer viruses to determine whether Web sites hosting the other

8   Web page are virus hosting; and

9   storing information relating to the Web sites that are hosting the other

10   Web pages in the database.

1   14.   The method of claim 13, wherein the stored information includes

2   information identifying the Web sites that are hosting the other Web pages and

3   information identifying any computer viruses that were found in the other Web

4   pages.

1   15.   A method for protecting a Web hosting system from hosting a Web page

2   that contains a link to a computer virus comprising the steps of:

3   receiving information identifying a first Web page to be hosted by the

4   Web hosting system;

5   determining whether the first Web page includes a link to a Web site that

6   is included in a database of Web sites related to computer viruses; and

7   allowing hosting of the first Web page based on whether the Web page

8   includes a link to a Web site that is included in the database.

1   16.   The method of claim 15, wherein the determining step comprises the steps

2   of:

3   extracting, from the first Web page, links to other Web pages; and

4   determining whether the other Web pages are hosted by Web sites that are

5   included in the database.

1   17.   The method of claim 16, wherein the allowing step comprises the steps of:

2   refusing to host the first Web page, if the first Web page includes a link to

3   a Web page that is hosted by a Web site that is included in the database; and

4   hosting the first Web page, if the first Web page includes no links to a any

5   Web pages that are hosted by a Web site that is included in the database.

1   18.   The method of claim 17, further comprising the step of:

2   generating the database of Web sites related to computer viruses.

1   19.   The method of claim 18, wherein the generating step comprises the steps

2   of:

3   extracting, from a first Web page, a link to a second Web page;

4   fetching the second Web page using the link;

5   scanning the second Web page for computer viruses; and

6   storing information relating to a Web site that is hosting the second Web

7   page in the database.

1   20.   The method of claim 19, wherein the stored information includes

2   information identifying the Web site that is hosting the second Web page and

3   information identifying any computer viruses that were found in the second Web

4   page.

1   21.   The method of claim 19, further comprising the steps of:

2   extracting, from each Web page fetched, links to other Web pages;

3   fetching the other Web pages using the links;

4   scanning the other Web pages for computer viruses; and

5   storing information relating to Web sites that are hosting the other Web

6   pages in the database.

1   22.   The method of claim 21, wherein the stored information includes

2   information identifying the Web sites that are hosting the other Web pages and

3   information identifying any computer viruses that were found in the other Web

4   pages.

1   23.   The method of claim 18, wherein the generating step comprises the steps

2   of:

3   extracting, from a first Web page, a link to a second Web page;

4   fetching the second Web page using the link;

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5   scanning the second Web page for terminology relating to computer

6   viruses;

7   reviewing content of the second Web page to determine whether a Web

8   site hosting the second Web page is virus hosting, if the second Web page

9   includes terminology relating to computer viruses; and

10   storing information relating to the Web site that is hosting the second Web

11   page in the database.

1   24.   The method of claim 23, wherein the stored information includes

2   information identifying the second Web page and information identifying any

3   computer viruses that were found in the second Web page.

1   25.   The method of claim 23, further comprising the steps of:

2   extracting, from each Web page fetched, links to other Web pages;

3   fetching the other Web pages using the links;

4   scanning the other Web pages for terminology relating to computer

5   viruses;

6   reviewing content of those other Web pages that include terminology

7   relating to computer viruses to determine whether Web sites hosting the other

8   Web page are virus hosting; and

9 storing information relating to the Web sites that are hosting the other

10 Web pages in the database.

1 26. The method of claim 25, wherein the stored information includes

2 information identifying the Web sites that are hosting the other Web pages and

3 information identifying any computer viruses that were found in the other Web

4 pages.

1 27. A system for protecting users from Web sites hosting computer viruses

2 comprising:

3 a processor operable to execute computer program instructions;

4 a memory operable to store computer program instructions executable

5 by the processor; and

6 computer program instructions stored in the memory and executable to

7 perform the steps of:

8 receiving information identifying a Web page selected for access by a

9 user;

10 determining whether the Web page is hosted by a Web site that is

11 included in a database of Web sites related to computer viruses; and

12 allowing access to the Web page based on whether the Web page includes

13 a link to a Web site that is included in the database.

1   28.   The system of claim 27, further comprising computer program

2   instructions executable to perform the step of:

3   preventing access to the Web page before determining whether the Web

4   page is included in the database.

1   29.   The system of claim 28, wherein the allowing step comprises the steps of:

2   allowing access to the Web page, if the Web page is determined not to be

3   included in the database; and

4   continuing to prevent access to the Web page, if the Web page is

5   determined to be included in the database.

1   30.   The system of claim 27, further comprising computer program

2   instructions executable to perform the step of:

3   allowing access to the Web page before determining whether the Web

4   page is included in the database.

1   31.   The system of claim 30, wherein the allowing step comprises the steps of:

2   continuing to allow access to the Web page, if the Web page is

3   determined not to be included in the database; and

4   preventing access to the Web page, if the Web page is determined to be

5   included in the database.

1   32.   The system of claim 27, further comprising computer program

2   instructions executable to perform the step of:

3   generating the database of Web sites related to computer viruses.

1   33.   The system of claim 32, wherein the generating step comprises the steps

2   of:

3   extracting, from a first Web page, a link to a second Web page;

4   fetching the second Web page using the link;

5   scanning the second Web page for computer viruses; and

6   storing information relating to a Web site that is hosting the second Web

7   page in the database.

1   34.   The system of claim 33, wherein the stored information includes

2   information identifying the Web site that is hosting the second Web page and

3   information identifying any computer viruses that were found in the second Web

4   page.

1 35. The system of claim 33, further comprising computer program

2 instructions executable to perform the steps of:

3   extracting, from each Web page fetched, links to other Web pages;

4   fetching the other Web pages using the links;

5   scanning the other Web pages for computer viruses; and

6   storing information relating to Web sites that are hosting the other Web

7 pages in the database.

1 36. The system of claim 35, wherein the stored information includes

2 information identifying the Web sites that are hosting the other Web pages and

3 information identifying any computer viruses that were found in the other Web

4 pages.

1 37. The system of claim 32, wherein the generating step comprises the steps

2 of:

3   extracting, from a first Web page, a link to a second Web page;

4   fetching the second Web page using the link;

5   scanning the second Web page for terminology relating to computer

6 viruses;

7   reviewing content of the second Web page to determine whether a Web

8   site hosting the second Web page is virus hosting, if the second Web page

9   includes terminology relating to computer viruses; and

10   storing information relating to the Web site that is hosting the second Web

11   page in the database.

1   38.   The system of claim 37, wherein the stored information includes

2   information identifying the second Web page and information identifying any

3   computer viruses that were found in the second Web page.

1   39.   The system of claim 37, further comprising computer program

2   instructions executable to perform the steps of:

3   extracting, from each Web page fetched, links to other Web pages;

4   fetching the other Web pages using the links;

5   scanning the other Web pages for terminology relating to computer

6   viruses;

7   reviewing content of those other Web pages that include terminology

8   relating to computer viruses to determine whether Web sites hosting the other

9   Web page are virus hosting; and

10   storing information relating to the Web sites that are hosting the other

11   Web pages in the database.

1   40.   The system of claim 39, wherein the stored information includes

2   information identifying the Web sites that are hosting the other Web pages and

3   information identifying any computer viruses that were found in the other Web

4   pages.

1   41.   A system for protecting a Web hosting system from hosting a Web page

2   that contains a link to a computer virus comprising:

3   a processor operable to execute computer program instructions;

4   a memory operable to store computer program instructions executable

5   by the processor; and

6   computer program instructions stored in the memory and executable to

7   perform the steps of:

8   receiving information identifying a first Web page to be hosted by the

9   Web hosting system;

10   determining whether the first Web page includes a link to a Web site that

11   is included in a database of Web sites related to computer viruses; and

12   allowing hosting of the first Web page based on whether the Web page

13   includes a link to a Web site that is included in the database.

1   42.   The system of claim 41, wherein the determining step comprises the steps
2   of:

3   extracting, from the first Web page, links to other Web pages; and

4   determining whether the other Web pages are hosted by Web sites that are

5   included in the database.

1   43.   The system of claim 42, wherein the allowing step comprises the steps of:

2   refusing to host the first Web page, if the first Web page includes a link to

3   a Web page that is hosted by a Web site that is included in the database; and

4   hosting the first Web page, if the first Web page includes no links to a any

5   Web pages that are hosted by a Web site that is included in the database.

1   44.   The system of claim 43, further comprising computer program

2   instructions executable to perform the steps of:

3   generating the database of Web sites related to computer viruses.

1   45.   The system of claim 44, wherein the generating step comprises the steps

2   of:

3   extracting, from a first Web page, a link to a second Web page;

4   fetching the second Web page using the link;

5   scanning the second Web page for computer viruses; and

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6   storing information relating to a Web site that is hosting the second Web

7 page in the database.

1 46.   The system of claim 45, wherein the stored information includes

2 information identifying the Web site that is hosting the second Web page and

3 information identifying any computer viruses that were found in the second Web

4 page.

1 47.   The system of claim 45, further comprising computer program

2 instructions executable to perform the steps of:

3   extracting, from each Web page fetched, links to other Web pages;

4   fetching the other Web pages using the links;

5   scanning the other Web pages for computer viruses; and

6   storing information relating to Web sites that are hosting the other Web

7 pages in the database.

1 48.   The system of claim 47, wherein the stored information includes

2 information identifying the Web sites that are hosting the other Web pages and

3 information identifying any computer viruses that were found in the other Web

4 pages.

1   49.   The system of claim 44, wherein the generating step comprises the steps

2   of:

3   extracting, from a first Web page, a link to a second Web page;

4   fetching the second Web page using the link;

5   scanning the second Web page for terminology relating to computer

6   viruses;

7   reviewing content of the second Web page to determine whether a Web

8   site hosting the second Web page is virus hosting, if the second Web page

9   includes terminology relating to computer viruses; and

10   storing information relating to the Web site that is hosting the second Web

11 page in the database.

1   50.   The system of claim 49, wherein the stored information includes

2   information identifying the second Web page and information identifying any

3   computer viruses that were found in the second Web page.

1   51.   The system of claim 49, further comprising computer program

2   instructions executable to perform the steps of:

3   extracting, from each Web page fetched, links to other Web pages;

4   fetching the other Web pages using the links;

5   scanning the other Web pages for terminology relating to computer

6 viruses;

7   reviewing content of those other Web pages that include terminology

8 relating to computer viruses to determine whether Web sites hosting the other

9 Web page are virus hosting; and

10   storing information relating to the Web sites that are hosting the other

11 Web pages in the database.

1 52.   The system of claim 51, wherein the stored information includes

2 information identifying the Web sites that are hosting the other Web pages and

3 information identifying any computer viruses that were found in the other Web

4 pages.

1 53.   A computer program product for protecting users from Web sites hosting

2 computer viruses, comprising:

3   a computer readable medium;

4   computer program instructions, recorded on the computer readable

5 medium, executable by a processor, for performing the steps of

6   receiving information identifying a Web page selected for access by a

7 user;

8   determining whether the Web page is hosted by a Web site that is

9   included in a database of Web sites related to computer viruses; and

10   allowing access to the Web page based on whether the Web page includes

11   a link to a Web site that is included in the database.

1   54.   The computer program product of claim 53, further comprising computer

2   program instructions executable to perform the steps of:

3   preventing access to the Web page before determining whether the Web

4   page is included in the database.

1   55.   The computer program product of claim 54, wherein the allowing step

2   comprises the steps of:

3   allowing access to the Web page, if the Web page is determined not to be

4   included in the database; and

5   continuing to prevent access to the Web page, if the Web page is

6   determined to be included in the database.

1   56.   The computer program product of claim 53, further comprising computer

2   program instructions executable to perform the steps of:

3   allowing access to the Web page before determining whether the Web

4   page is included in the database.

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1 57. The computer program product of claim 56, wherein the allowing step

2 comprises the steps of:

3 continuing to allow access to the Web page, if the Web page is

4 determined not to be included in the database; and

5 preventing access to the Web page, if the Web page is determined to be

6 included in the database.

1 58. The computer program product of claim 53, further comprising computer

2 program instructions executable to perform the steps of:

3 generating the database of Web sites related to computer viruses.

1 59. The computer program product of claim 58, wherein the generating step

2 comprises the steps of:

3 extracting, from a first Web page, a link to a second Web page;

4 fetching the second Web page using the link;

5 scanning the second Web page for computer viruses; and

6 storing information relating to a Web site that is hosting the second Web

7 page in the database.

1   60.   The computer program product of claim 59, wherein the stored

2   information includes information identifying the Web site that is hosting the

3   second Web page and information identifying any computer viruses that were

4   found in the second Web page.

1   61.   The computer program product of claim 59, further comprising computer

2   program instructions executable to perform the steps of:

3   extracting, from each Web page fetched, links to other Web pages;

4   fetching the other Web pages using the links;

5   scanning the other Web pages for computer viruses; and

6   storing information relating to Web sites that are hosting the other Web

7   pages in the database.

1   62.   The computer program product of claim 61, wherein the stored

2   information includes information identifying the Web sites that are hosting the

3   other Web pages and information identifying any computer viruses that were

4   found in the other Web pages.

1   63.   The computer program product of claim 58, wherein the generating step

2   comprises the steps of:

3   extracting, from a first Web page, a link to a second Web page;

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4   fetching the second Web page using the link;

5   scanning the second Web page for terminology relating to computer

6 viruses;

7   reviewing content of the second Web page to determine whether a Web

8 site hosting the second Web page is virus hosting, if the second Web page

9 includes terminology relating to computer viruses; and

10   storing information relating to the Web site that is hosting the second Web

11 page in the database.

1 64.   The computer program product of claim 63, wherein the stored

2 information includes information identifying the second Web page and

3 information identifying any computer viruses that were found in the second Web

4 page.

1 65.   The computer program product of claim 63, further comprising computer

2 program instructions executable to perform the steps of:

3   extracting, from each Web page fetched, links to other Web pages;

4   fetching the other Web pages using the links;

5   scanning the other Web pages for terminology relating to computer

6 viruses;

7   reviewing content of those other Web pages that include terminology

8   relating to computer viruses to determine whether Web sites hosting the other

9   Web page are virus hosting; and

10   storing information relating to the Web sites that are hosting the other

11   Web pages in the database.

1   66.   The computer program product of claim 65, wherein the stored

2   information includes information identifying the Web sites that are hosting the

3   other Web pages and information identifying any computer viruses that were

4   found in the other Web pages.

1   67.   A computer program product for protecting a Web hosting system from

2   hosting a Web page that contains a link to a computer virus, comprising:

3   a computer readable medium;

4   computer program instructions, recorded on the computer readable

5   medium, executable by a processor, for performing the steps of

6   receiving information identifying a first Web page to be hosted by the

7   Web hosting system;

8   determining whether the first Web page includes a link to a Web site that

9   is included in a database of Web sites related to computer viruses; and

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10   allowing hosting of the first Web page based on whether the Web page

11 includes a link to a Web site that is included in the database.

1   68.   The computer program product of claim 67, wherein the determining step

2   comprises the steps of:

3   extracting, from the first Web page, links to other Web pages; and

4   determining whether the other Web pages are hosted by Web sites that are

5   included in the database.

1   69.   The computer program product of claim 68, wherein the allowing step

2   comprises the steps of:

3   refusing to host the first Web page, if the first Web page includes a link to

4   a Web page that is hosted by a Web site that is included in the database; and

5   hosting the first Web page, if the first Web page includes no links to a any

6   Web pages that are hosted by a Web site that is included in the database.

1   70.   The computer program product of claim 69, further comprising computer

2   program instructions executable to perform the steps of:

3   generating the database of Web sites related to computer viruses.

1   71.   The computer program product of claim 70, wherein the generating step

2   comprises the steps of:

3   extracting, from a first Web page, a link to a second Web page;

4   fetching the second Web page using the link;

5   scanning the second Web page for computer viruses; and

6   storing information relating to a Web site that is hosting the second Web

7   page in the database.

1   72.   The computer program product of claim 71, wherein the stored

2   information includes information identifying the Web site that is hosting the

3   second Web page and information identifying any computer viruses that were

4   found in the second Web page.

1   73.   The computer program product of claim 71, further comprising computer

2   program instructions executable to perform the steps of:

3   extracting, from each Web page fetched, links to other Web pages;

4   fetching the other Web pages using the links;

5   scanning the other Web pages for computer viruses; and

6   storing information relating to Web sites that are hosting the other Web

7   pages in the database.

1 74. The computer program product of claim 73, wherein the stored

2 information includes information identifying the Web sites that are hosting the

3 other Web pages and information identifying any computer viruses that were

4 found in the other Web pages.

1 75. The computer program product of claim 70, wherein the generating step

2 comprises the steps of:

3   extracting, from a first Web page, a link to a second Web page;

4   fetching the second Web page using the link;

5   scanning the second Web page for terminology relating to computer

6 viruses;

7   reviewing content of the second Web page to determine whether a Web

8 site hosting the second Web page is virus hosting, if the second Web page

9 includes terminology relating to computer viruses; and

10   storing information relating to the Web site that is hosting the second Web

11 page in the database.

1 76. The computer program product of claim 75, wherein the stored

2 information includes information identifying the second Web page and

3 information identifying any computer viruses that were found in the second Web

4 page.

1 77.   The computer program product of claim 75, further comprising computer

2 program instructions executable to perform the steps of:

3   extracting, from each Web page fetched, links to other Web pages;

4   fetching the other Web pages using the links;

5   scanning the other Web pages for terminology relating to computer

6 viruses;

7   reviewing content of those other Web pages that include terminology

8 relating to computer viruses to determine whether Web sites hosting the other

9 Web page are virus hosting; and

10   storing information relating to the Web sites that are hosting the other

11 Web pages in the database.

1 78.   The computer program product of claim 77, wherein the stored

2 information includes information identifying the Web sites that are hosting the

3 other Web pages and information identifying any computer viruses that were

4 found in the other Web pages.